

COMMITTEE STAFF

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
BACKUP BOOK

FY 1999 AMENDED BUDGET ESTIMATES

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THE JOINT STAFF
FY 1999 AMENDED BUDGET ESTIMATES
Research, Development, Testing and Evaluation, Defense-Wide

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PROGRAM ELEMENT COMPARISON SUMMARY

INTRODUCTION AND EXPLANATION OF CONTENTS

<u>PROGRAM ELEMENT</u>	<u>REMARKS</u>
<u>BUDGET ACTIVITY 4: ADVANCED TECHNOLOGY DEVELOPMENT</u>	
0603734J, ISLAND SUN	SAR - Justification under separate cover.
0603857J, All Service Combat Identification Evaluation Team (ASCIET)	FY99 is the first year for Joint Staff RDT&E funding. FY97 and FY98 funding was provided through Memorandum of Agreement (MOA) by all four services.
<u>BUDGET ACTIVITY 6: RDT&E Management Support</u>	
0605126J, Joint Theater Air & Missile Defense Organization (JTAM/DO)	FY98 reductions reflect Congressional adjustments and inflation.
<u>BUDGET ACTIVITY 7: OPERATIONAL SYSTEM DEVELOPMENT</u>	
0305188J, Joint C4ISR Battle Center (JBC)	FY98 funds were moved from PE 0303149J, C4I For the Warrior, into this newly established PE. In addition, resources were reallocated between Procurement and RDT&E based on JBC's mission to assess, evaluate, and validate C4ISR systems in advance of service procurement fielding. FY99 reductions reflect decisions made in the Defense Reform Initiative (DRI) to transfer the JBC program to U.S. Atlantic Command (Navy is the Executive Agent).
0902298J, Joint Warfighting Capabilities Assessment (JWCA)	FY98 reductions due to Congressional undistributed adjustments.

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PROGRAM ELEMENT COMPARISON SUMMARY

INTRODUCTION AND EXPLANATION OF CONTENTS

PROGRAM ELEMENT

0303149J, C4I For the Warrior (C4IIFTW)

1001017J Partnership-for Peace (PFP)

REMARKS

FY98 change to C4IIFTW is due to the transfer of funds to the newly established PE (0305188J) for JBC and to Congressional reductions.

The Partnership for Peace Information Management System RDT&E funding transferred to OSD for FY99-03 (\$2M per year).

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THE JOINT STAFF
FY1999 PRESIDENT'S BUDGET
RDT&E PROGRAMS
\$ IN MILLIONS

PROGRAM ELEMENT	TITLE	BUDGET ACTIVITY	FY97	FY98	FY99	
			ISLAND SUN*	4	1.198	0.000
0603734J	All Service Combat Identification Evaluation Team (ASCIET)	4		0.000	0.000	13.014
0603857J	Joint Theater Air & Missile Defense Organization (JTAMDO)	6		0.000	14.374	17.423
0605126J	Joint Analytical Model Improvement Prog (JAMIP)	7		.986	1.940	1.847
0208052J	C4I for the Warrior (C4IFTW)	7		2.502	2.506	2.819
0303149J	Joint C4ISR Battle Center (JBC)	7		2.829	2.808	0.000
0305188J	Management Headquarters (JWCA)	7		9.985	8.905	9.617
0902298J	Joint Simulation System (JSIMS)	7		21.020	23.443	24.775
TOTALS				38.520	53.976	69.495

* Exhibit R-2 for ISLAND SUN will be forwarded under separate cover.

Exhibit R-1

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE:	
0603857J All Service Combat Identification Evaluation Team (ASCIET) RDT&E, Defense Wide, Joint Staff/BA 4			
Cost (\$ in Millions)	FY1997	FY1998	FY1999
	0	0	13.014
TOTAL PE COST		FY2000	FY2001
		13.231	13.461
		FY2002	FY2003
		13.690	13.925
		Cost to Complete	Total Cost
			Continuing
			Continuing

A. Mission Description and Budget Item Justification:

The All Service Combat Identification Evaluation Team (ASCIET) will transfer to the Joint Staff during FY 1998. ASCIET was formed from the OSD-Sponsored Joint Air Defense Operations/Joint Engagement Zone (JADO/JEZ) Joint Test and Evaluation Program conducted during FY 1990 through FY 1994. JADO/JEZ tested the ability of Service forces to execute an effective air defense network in a joint tactical environment. In December 1993, the Joint Requirements Oversight Council (JROC) directed that the JADO/JEZ Program transition to the ASCIET Program on 1 October 1994. ASCIET is an expanding effort aimed at fostering improved tactics, techniques and procedures across all combat identification (CID) mission areas. ASCIET is chartered to employ the equipment and personnel of all Services to evaluate, investigate, and assess various concepts of combat identification on the battlefield. The US Air Force is the lead service. ASCIET will also offer federally funded research and development centers (FFRDCs), service battle laboratories, and industry the opportunity to review and evaluate emerging technologies in a multi-Service environment on a not-to-interfere basis as a risk reduction and verification opportunity during ASCIET evaluations. Requirements and resources for FY97 and FY98 come from Navy PE 060477N, Army PE 0604817A, Marine PE 0206623M, Air Force PE 0207417F.

ASCIET's efforts to evaluate, document and report on CID capability is a critical force enabler and a Department priority. Perceived inaction on ASCIET identified deficiencies in CID has forced changes in the command and control of the ASCIET organization. During FY 1998, the organization will be moved under the Joint Staff to ensure a coordinated, synergistic approach for improving warfighting capability into the 21st century. By evaluating interoperability, technology application and development, and training, the new organization will provide the means to efficiently assess ground, air and maritime force capabilities, determine future requirements, develop new systems, and program for long term procurement. (From inception through FY 1998, ASCIET has been funded annually by all four Services through a Memorandum Of Agreement.) This program is in budget activity 4 which includes efforts necessary to evaluate integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE:	
RDT&E, Defense Wide, Joint Staff/BA 4	0603857J All Service Combat Identification Evaluation Team (ASCIET)	

FY 1999 7.200 Evaluation Support: Contractors for instrumentation/transport/rental equipment (track costs), Combat Unit travel, billeting, and per diem expense, augmentees for evaluation manpower support (FAA, security, weapons systems specialist), military vehicles, loading/unloading equipment, etc.

.174 ASCIET members travel
5.000 Annual Contractors: Research of emerging technologies, analysis of data from evaluation.
.040 Base Operations: facilities maintenance, utilities, postage, shipping, photolab, cleaning, etc.
.300 ASCIET operations: supplies, computer/upgrades, copiers, faxes, phone, etc.
.300 Conferences to Plan Evaluation: Initial Planning, Air Space, Opposing Force, Site visit to Evaluation Location, Concept of Operations, Final Planning
\$13.014 Total

	<u>Total Cost</u>		
	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>
9.935*/**	0	8.000*/**	0
FY1998 President's Budget			
FY1998 Appropriated Value	0	0	0
Adjustments to Appropriated Value	0	0	13.014
FY1999 President's Budget	0	0	13.014
Continuing			

Change Summary Explanation:**Funding:**

*FY97 and FY98 funding is provided as information only (non-add) as it is provided by all four services by Memorandum of Agreement: Navy PE 0604777N, Army PE 0604817A, Marine PE 0206623M, and Air Force PE 0207417F. FY99 begins ASCIET funding in the Joint Staff.

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE:	
RDT&E, Defense Wide, Joint Staff/BA 4	0603857J	All Service Combat Identification Evaluation Team (ASCIET)

** FY99 budget of \$13 million is the normal funding historically provided to ASCIET. In FY97 due to insufficient ground maneuver area, the surface-to-surface mission area was not evaluated, therefore the services withheld \$2.7 million in funding. FY98 Budget reduced due to change in venue resulting in no Evaluation in FY98.

C. Other Program Funding Summary: N/A

D. Schedule Profile: Not applicable. ASCIET conducts an annual combat ID evaluation, employing assets from all four armed services, to evaluate the results when representative forces use fielded systems in a realistic environment. Three major planning conferences involving service participants as well as mini-evaluations, demonstrations, and rehearsals are used as a prelude to the live evaluation to reduce technical risk, develop procedures and architectures, and refine operational plans.

U N C L A S S I F I E D

Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE:	
RDT&E, Defense Wide, Joint Staff/BA 6		0605126J - Joint Theater Air and Missile Defense Organization (JTAMDO)	
Cost (\$ in Millions)	FY1997	FY1998	FY1999
TOTAL PE COST	0	14.374	17.423
	FY2000	FY2001	FY2002
	17.357	17.002	17.334
	FY2003	Cost to Complete	Total Cost
	17.672	Continuing	Continuing

A. Mission Description and Budget Item Justification:

JTAMDO is the single organization within DoD chartered to plan, coordinate, and oversee joint integrated theater air and missile defense (TAMD) requirements, joint operational concepts, and operational architectures. Evaluations are to determine deficiencies in DoD's air and missile defense capabilities concepts, architectures, capabilities and technologies. The JTAMDO is also responsible for proposing and evaluating and their impact on warfighting CINCs in order to define requirements, architectures and weapon system performance. The JTAMDO functions include: lead development of joint concepts, architectures and requirements; serve as the operational community's proponent for requirements in theater air and missile defense; serve as the joint theater air and missile defense resource proponent within the resource allocation structures of the Services, BMDO, and DARPA; lead TAMD mission area analysis; conduct evaluations and demonstrations of joint air defense architectures and concepts; monitor the research, development, acquisition, and demonstration activity associated with the Service's TAMD programs; recommend to the JROC those RD&A efforts which should be designated as TAMD programs; recommend to the JROC and USD A&T requirements, technologies, architectures and concepts which should be evaluated, developed and fielded; develop and maintain the TAMD Master Plan which will contain requirements, assessments of current and future capabilities and an acquisition roadmap for development and fielding of required capabilities. This program is in budget activity 6 - as it performs management support of RDT&E Activities.

FY1998
\$7.620

Conduct modeling and simulation activities to: provide an analytical basis for requirements; develop and evaluate new battle management concepts and employment concepts; examine the impact and application of advanced technology concepts. Planned activities include integration of AWACs and Patriot with the Navy's Cooperative Engagement Capability (CEC) system; examination of basic employment concepts for Joint Engagement Zone operations; and examination of cruise missile defense systems and architectures to determine current and future DoD capabilities.

\$3.673
Leverage All Service Combat Identification Evaluation Team (ASCIET), Joint Warfighter Interoperability Demonstration (JWID), Joint Task Force Exercise (JTFEX), Roving Sands and others to: evaluate new battle management concepts; develop new Joint TRPs for TAMD; examine advanced technology concepts; validate TAMD employment laydowns.

U N C L A S S I F I E D**Exhibit R-2, RDT&E Budget Item Justification**

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM Nomenclature:	Date: February 1998
RTT&E, Defense Wide, Joint Staff/BA 6	0605126J Joint Theater Air and Missile Defense Organization (JTAMDO)	
\$.895	Provide direct support to CINCs to evaluate and explore unique CINC problem areas in TAMD by facilitating and funding the participation of agencies, C2 platforms, and test support equipment and personnel in exercises such as Ulchi Focus Lens (PACOM) and Optic Windmill (EUCOM).	
\$.100	Develop threat scenarios to support analysis efforts. Conduct initial planning and development for a FY02 TAMD demonstration. Specific activities include development of detailed threat laydown and enemy employment scheme suitable for use in detailed engineering analysis and modeling; develop an integrated schedule for Service weapon system tests and evaluations.	
\$2.086	Fund JTAMDO operations, including civilian pay, office equipment, training, administrative support and travel.	
	Total	
<u>FY1999</u>		
\$8.575	Conduct modeling and simulation activities to develop and evaluate new battle management concepts, employment concepts and application of advanced technology concepts. Specific activities include: studies and simulations of JTIDS and CEC capabilities to produce a Single Integrated Air Picture (SIAP); examination of combat ID (CID) needs and deficiencies for cruise missiles; examination of long range, wide area CID to support defense in depth against weapons of mass destruction; modeling evaluation of sensor (AWACS, AEGIS, E-2, CRC, UAV) laydown options to optimize SIAP coverage and threat detection and engagement; modeling of fighter and SAM joint engagement zones to provide kill performance data, information exchange requirements, and define TRPs.	
\$4.230	Validate TAMD force employment laydowns. Planned activities include development and use of a joint defensive planner (Roving Sands); development of requirements for hardware/personnel to support a Joint Interface Control Officer (JICO) to support data link employment (ASCIET and Roving Sands); joint engagement zone CONOPS development and refinement.	
\$2.216	Provide direct support to CINCs to evaluate and explore unique CINC problem areas in TAMD by facilitating and funding the participation of agencies, C2 platforms, and test support equipment and personnel in exercises such as Ulchi Focus Lens (PACOM) and Optic Windmill (EUCOM).	
\$.731	Demonstration activities. Fund additional analysis at planned Service tests and technology demonstration (USAF and USMC) to focus on joint concepts in order to define joint requirements and refine employment concepts.	
<u>\$1.671</u>	Fund JTAMDO operations, including civilian pay, office equipment, training, administrative support and travel.	
	Total	

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE:	
0605126J RDT&E, Defense Wide, Joint Staff/BA 6	Joint Theater Air and Missile Defense Organization (JTAMDO)	

B. Program Change Summary:

	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>	<u>Total Cost</u>
FY1998 President's Budget	0	23.100	17.850	Continuing
FY1998 Appropriated Value	0	16.100		
Adjustments		-1.726	-0.427	
FY1999 President's Budget Submission	0	14.374	17.423	Continuing

Change Summary Explanation: The reductions for FY 1998 and FY 1999 are due to Congressional non-programmatic and inflation reductions.

IMPACTS: Budget reductions have resulted in JTAMDO severely reducing its analysis activities, participation in exercises and demonstrations, and its CIINC support activities. This will significantly delay development of requirements and subsequently the prioritization and fielding of critical cruise missile, ballistic missile and aircraft defenses. Examples of specific activities JTAMDO has been unable to execute due to funding cuts are: Eliminating support for the Composite Tracking Network (JCTN) Study Phase 3. This cancellation will further delay the definition of the technical and operational architectures for the Single Integrated Air Picture (SIAP). SIAP is key to developing the common unambiguous picture to support improved joint situational awareness, battle management, target engagement, and eliminating fratricide. Activities at the Navy's Applied Physics Lab to determine optimization of sensor laydowns for cruise missile detection and engagement will be delayed until 1999. Examination of Link 16 data loading increases as a result of the SIAP will be delayed until 1999. Evaluation of the methodology and benefit of standardizing data protocol for TAMD weapon and C2 systems will be canceled. Activities at the Army's Air Defense Artillery School to evaluate alternative laydown options for Army surface to air defenses to optimize cruise missile defense will be delayed until at least 1999. Joint engagement zone connectivity requirements definition at the Navy's California research facility will be canceled. Examination of the impact of the Navy's cooperative engagement (CEC) data on Link 16 and its benefit to joint employment will be delayed until at least 1999. Examination and data collection on ballistic missile defense C2 connectivity in PACOM in Ulchi Focus Lens will be canceled. Demonstration and examination of joint defensive planning tools in JTDX Spring 98 will be canceled. We will achieve these projects canceled. Demonstration and examination of joint defensive planning tools in JTDX Spring 98 will be canceled. We will achieve these projects canceled.

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Exhibit R-2, RDT&E Budget Item Justification

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Exhibit R-2, RDT&E Budget Item Justification	Date: February 1998
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE:
RDT&E, Defense Wide, Joint Staff/BA 6	0605126J Joint Theater Air and Missile Defense Organization (JTAMDO)

in the outyears with additional funding but this progressively delays our ability to develop and validate viable TAMD requirements and architectures.

C. Other Program Funding Summary: N/A

D. Schedule Profile: N/A

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998							
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE:							
RDT&E, Defense Wide, Joint Staff/BA 7		0208052J Joint Analytical Model Improvement Program (JAMIP)							
Cost (\$ in Millions)	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	Cost to Complete	Total Cost
TOTAL PE COST	.986	1.940	1.847	1.041	0.364	0.200	0	TBD	TBD

A. Mission Description and Budget Item Justification:

In May 1995, DepSecDef approved JAMIP to improve analytic support to senior DOD officials. The Joint Staff/J8 shares the lead with OSD/PA&E. The centerpiece of JAMIP is the development of the Joint Warfare System (JWARS), which will be a state-of-the-art, closed-form, constructive simulation of multi-sided, joint warfare for analysis. The Joint Staff and the Services have agreed upon JWARS as the common model to be used throughout the DOD analytic modeling community. JWARS is an advanced theater-level campaign analysis tool that will provide improved Command, Control, Communications, Computers Intelligence, Surveillance and Reconnaissance (C4ISR) and balanced joint warfare representations, and will be used for planning and execution, force assessment, system effectiveness and trade off analysis, and concept and doctrine development and assessment. Users of JWARS will include the Joint Staff, Services, CINCs, OSD, Joint Task Force Commanders/Staffs, selected other DOD organizations, and industry. R&D funds are used for research and design on challenging representation problems and independent testing, and are needed to continue development of the top priority joint warfare model as directed by DepSecDef and endorsed by VCJCS. This program is in Budget Activity 7 - Operational Systems Development because it supports currently employed systems and training activities.

B. Program Change Summary:

	FY1997	FY1998	FY1999	Total Cost
FY1998 President's Budget	1.000	2.186	1.883	Continuing
FY1998 Appropriated Value		2.186		
Adjustments	-0.014	-0.246	-0.036	Continuing
FY1999 President's Budget	0.986	1.940	1.847	

Reductions reflect program's share of Congressional undistributed reductions, inflation adjustments and internal realignments.

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE:	
RDT&E, Defense Wide, Joint Staff/BA 7	02080521 Joint Analytical Model Improvement Program (JAMIP)	

C. Other Program Funding Summary:		Cost to Complete	Total Cost						
Cost (\$ in Millions)		FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	
O&M	9.341	11.531	8.422	11.296	11.577	11.578	7.850		NA
Procurement	0.000	.533	.832	.715	.634	.414	.422		NA

D. Schedule Profile: The RDT&E will be spent during various quarters of each FY.

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Exhibit R-2, RDT&E Budget Item Justification										Date: February 1998	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE:									
RDT&E, Defense Wide, Joint Staff/BA 7		0303149J C4I for the Warrior									
Cost (\$ in Millions)	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	Cost to Complete		Total Cost	
Prog: STEP/JWID/Advanced Concepts	2.502	2.506	2.819	3.016	2.910	2.974	2.922	Continuing		Continuing	
TOTAL P/E COST											

A. Mission Description and Budget Item Justification:

C4I for the Warrior is the linchpin for promoting immediate joint coalition C4I interoperability worldwide. This program provides focus and visibility into resolving C4I interoperability issues and provides organizing principles, policy and doctrine for information superiority as directed by JV2010. C4IIFTW stresses interoperability and leverages the rapid pace of C4I technology advancements. This program is based on three subprograms: 1) Advanced Concepts, 2) Joint Warrior Interoperability Demonstrations (JWID), and 3) Standard Tactical Entry Point (STEP). As the C4IIFTW concepts evolve and mature, they will spawn new approaches to providing the joint warfighter with a fused real time, true representation of the battlespace. It is a unifying concept that brings the warrior an accurate and complete picture of the battlespace, timely and detailed mission objectives, and the clearest view of the targets. The Advanced Concepts initiative is intended to leverage commercial technologies and government-funded developments to provide high priority technologies to the warfighter in the shortest period of time. The current focus of Advanced Concepts, the Network Warfare Simulation (NETWARS) model, addresses communications burden issues. The NETWARS model will: assess the effects of full operational combat traffic loading on current and future tactical communications; conduct quick-turn communications planning for small regional conflicts or peacekeeping scenarios; and evaluate new communication systems and technologies. JWIDs are Joint Staff-sponsored C4I demonstrations of existing, off-the-shelf, new and evolving C4I technologies. The demonstrations, which are jointly screened to determine ability to satisfy warfighting requirements, enable warfighters to operate these capabilities and assess their ability to enhance their operational missions. The STEP program will establish a standard set of C4I services at selected Defense Satellite Communications Systems (DSCS) gateways and STEP sites to support a Commander Joint Task Force (CJTF) and its component forces worldwide. STEP essentially extends the Defense Information System Network (DISN) to the tactical forces specifically, services from the Defense Switched Network (DSN), Defense Red Switch Network (DRSN), Unclassified, but sensitive, and SECRET Internet Protocol Router Networks (NIPRNET/SIPRNET) video teleconference (VTC), and the Joint Worldwide Intelligence Communications System (JWICS). (STEP has no RDT&E funds - it uses O&M and procurement funds only.)

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Exhibit R-2, RDT&E Budget Item Justification

Date: February 1998

APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE:**
 RDT&E, Defense Wide, Joint Staff/BA 7 0303149J C4I for the Warrior

	<u>FY98</u>	<u>FY99</u>	<u>Description</u>
0.194	0.193	0.135	Joint Warrior Interoperability Demonstrations (JWID)
2.308	2.313	2.684	Advanced Concepts - NETWARS
2.502	2.506	2.819	Total

B. Program Change Summary:

	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>	<u>Total Cost</u>
				<u>Continuing</u>
FY1998 President's Budget	2.554	5.554	3.215	
FY1998 Appropriated Value		5.554		
Adjustments to Appropriated Value				
a. Transfer JBC to new PE	0	-2.964	-3.025	
b. Reallocation of non-programmatic adjustments	-0.052	0	0	
c. Advance Concepts Funding	0	0	2.684	
d. Congressional Reductions/Inflation		-0.084	-.055	
FY1999 President's Budget	2.502	2.506	2.819	Continuing

Change Summary Explanation:**Funding:**

- This PE no longer contains the Joint C4ISR Battle Center (JBC). JBC funding was moved to its own newly established PE 0305188J.
- Reductions in FY97 are due to non-programmatic adjustments.
- The change in funding in FY99 reflects the development of the overall C4ITFW account. Advance Concepts' current focus is to develop a joint C4 assessment model, the Network Warfare Simulation (NETWARS) model, to evaluate such advanced concepts as: evaluating emerging technologies; performing communications burden assessment; and doing contingency planning. It will integrate the various Services communications devices and systems, in a timely fashion, into a common and realistic COTS (commercial

U N C L A S S I F I E D**Exhibit R-2, RDT&E Budget Item Justification****Date: February 1998**

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE:
RDT&E, Defense Wide, Joint Staff/BA 7	0303149J C4I for the Warrior

off-the-shelf) based simulation framework for detailed assessments of joint C4 connectivity and capabilities. NETWARS leverages commercial technologies and government funded developments and provides high priority technologies to the warfighter. No single model or environment exists that supports: a robust simulation of Joint Task Force tactical communications; joint tactical network traffic analysis; joint tactical communications contingency planning; and evaluation of emerging technologies. There is no current means to bring together the disparate Service specific communications modules into a single simulation. NETWARS is the first communications model to integrate the capability to assess networks across the spectrum of joint missions within a common framework.

d. FY98 reductions reflect program's share of Congressional/OSD reductions. FY99 reductions reflect inflation.

C. Other Program Funding Summary:	<u>Cost (\$ in Millions)</u>					<u>Cost to Complete</u>	<u>Total Cost</u>
	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>		
C&M	.763	3.666	1.287	1.264	1.268	1.190	1.200
Procurement	10.561	8.992	.790	.719	.686	.811	.823

Change between FY98 & FY99:

STEP will transfer from the Joint Staff to DISA beginning FY99. The Joint Staff has exercised both oversight and acquisition responsibilities for STEP program since the program was approved by the MCCEB and JROC in 1994 due to its enormous importance to the warfighting CINCs. The STEP Design Plan was approved on 7 October 1994. Since then, the program has matured to the point that it no longer requires direct Joint Staff program management and, in fact, the Defense Information Systems Agency (DISA) already has an office assigned which has been fulfilling program acquisition functions. DISA is better suited for program management functions and this transfer of responsibility is consistent with its role in other Military Satellite Communication System terminal and baseband equipment upgrade programs. The Joint Staff (J6) will retain its role as the program oversight authority to ensure that the program remains a viable asset to the warfighter.

D. Schedule Profile:

The RDT&E will be spent during various quarters of each FY.

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Exhibit R-2, RDT&E Budget Item Justification							Date: February 1998
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE:					
RDT&E, Defense Wide, Joint Staff/BA 7		Joint C4ISR Battle Center (JBC)					
Cost (\$ in Millions)		FY1997	FY1998	FY1999	FY2000	FY2001	FY2002
TOTAL PE COST		2.829	2.808	0	0	0	0
		FY1999	FY2000	FY2001	FY2002	FY2003	Cost to Complete
							Continuing
							Continuing

A. Mission Description and Budget Item Justification:

The Joint Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Battle Center (JBC) is the Chairman, Joint Chiefs of Staff (CJCS) facility for warfighter exploration and assessment of C4ISR capabilities. The Center provides the combatant commands, at the Joint Task Force (JTF) level, with a joint assessment and experimental environment for the warfighter and technologist in support of Joint Vision 2010 (JV2010). It serves as the technical analysis and assessment agency for the Joint Requirement Operating Council (JROC) in determining C4ISR system "value-added" PRIOR to introduction to the CINCs and in advance of system fielding in operational environments. The intent is for the JBC to be a forcing function for joint synchronization and a means to foster rapid, near-term insertion of C4ISR technology. The mission of the JBC is to provide rapid assessment of required C4ISR interoperability and warfighter utility, join emerging C4ISR technology with new operational doctrine, and result in fielding C4ISR capabilities that meet the joint warfighter's needs. Initial attention is focused on developing the experimentation and assessment methodology for implementing JV 2010. This program element is under Budget Activity 07 because it supports operational systems development.

B. Program Change Summary:

	FY1997	FY1998	FY1999	Total Cost
FY1998 President's Budget	0	0	0	Continuing
FY1998 Appropriated Value				
Adjustments to Appropriated Value				
a. Funds transfer from DISA	2.829	0	0	0
b. Funds transfer from PE 0303149J C4IFTW	0	2.964	3.025	
c. Fund reallocation from Procurement	0	0	2.327	
d. Congressional/undistributed Reductions		-.156		-5.352
e. Program Transfer				Continuing
FY1999 President's Budget	2.829	2.808	0	

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Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998
R-1 ITEM NOMENCLATURE:		
RDT&E, Defense Wide, Joint Staff/BA 7	0305188J	Joint C4ISR Battle Center (JBC)

Change Summary Explanation:**Funding:**

- a. JBC resources transferred from DISA to TJS in April 1997. FY 97 resources were not reflected in the FY 1998 President's Budget (FY97 obligations were split between DISA and the Joint Staff).
- b. Funds were moved from PE 0303149J – C4I For the Warrior to the newly established PE 0305188 – Joint C4ISR Battle Center .
- c. In addition, resources have been reallocated between Procurement and RDT&E based on JBC mission to assess, evaluate, and validate C4ISR systems in advance of service procurement/fielding.
- d. FY98 reductions reflect program's share of Congressional undistributed/OSD reductions.
- e. FY99 reductions reflect decisions made in the Defense Reform Initiative (DRI) to transfer the JBC to US Atlantic command (USACOM).

C. Other Program Funding Summary:

	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>Cost to Complete</u>	<u>Total Cost</u>
O&M	3.884	10.845	0	0	0	0	0	TBD	TBD
Procurement	1.192	2.834	0	0	0	0	0	TBD	TBD

D. Schedule Profile:

	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY1999</u>	<u>FY1999</u>
Host JWID								1 2 3 4	1 2 3 4
Federated Battle Lab Initial Operational Capability		X			X				
ATM Assessment Report									
ATM Operational Demo									
Link 16 Assessment Plans									
Link 16 Assessment Report									
Link 16 Operational Demo									

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Exhibit R-2, RDT&E Budget Item Justification

Date: February 1998

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE:					
RDT&E, Defense Wide, Joint Staff/BA 7		0902298J Management Headquarters (Joint Warfighting Capabilities Assessment)					

Cost (\$ in Millions)	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	Cost to Complete	Total Cost
TOTAL PE COST	9.985	8.905	9.617	9.686	9.619	9.577	9.553	TBD	TBD

A. Mission Description and Budget Item Justification:

Joint Warfighting Capabilities Assessment (JWCA) are studies conducted in: Strike; Land and Littoral Warfare; Strategic Mobility and Sustainability; Sea, Air and Space Support; Deterrence/Counter Proliferation; Regional Engagement/PRESENCE; Command and Control (C2); Information Warfare; Intelligence, Surveillance and Reconnaissance; Joint Readiness (Personnel); Joint Readiness (Forces); and Joint Readiness (Exercise/Training). Each JWCA is sponsored by a Joint Staff Directorate and is conducted by teams of warfighting and functional area experts from the unified commands, Services, Office of the Secretary of Defense, Federally Funded Research and Development Centers, and others as necessary. Assessments examine key relationships between warfighting capabilities and interactions and identify opportunities for improving warfighting effectiveness. JWCA processes assist the Joint Requirements Oversight Council (JROC) in providing recommendations to the chairman of the Joint Chiefs of Staff to support statutory responsibilities to provide military advice to the SECDEF on the military requirements priorities. This program is in Budget Activity 7 - Operational Systems Development because it supports currently employed systems and training activities.

B. Program Change Summary:

	FY1997	FY1998	FY1999	Total Cost
Continuing			9.806	
FY1998 President's Budget	10.012	10.035		
FY1998 Appropriated Value		10.035		
Adjustments	-0.027	-1.130	-0.189	
FY1999 President's Budget	9.985	8.905	9.617	Continuing

Reductions reflect program's share of Congressional undistributed reductions and inflation adjustments.

U N C L A S S I F I E D

Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide, Joint Staff/BA 7	R-1 ITEM NOMENCLATURE: 0902298J Management Headquarters (Joint Warfighting Capabilities Assessment)	
C. Other Program Funding Summary: Cost (\$ in Millions)	<u>FY1997</u> <u>FY1998</u> <u>FY1999</u> <u>FY2000</u> <u>FY2001</u> <u>FY2002</u> <u>FY2003</u>	<u>Cost to Complete</u> <u>Total Cost</u>

O&M	2.973	2.977	2.936	3.000	3.000	3.000	3.000	N/A	N/A
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D. Schedule Profile: N/A

The RDT&E will be spent during various quarters of each FY.

U N C L A S S I F I E D

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Exhibit R-2, RDT&E Budget Item Justification							Date: February 1998
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE:					
RDT&E, Defense Wide, Joint Staff/BA 7		Joint Simulation System (JSIMS)					
Cost (\$ in Millions)		FY1997	FY1998	FY1999	FY2000	FY2001	FY2002
TOTAL PE COST		21.020	23.443	24.775	18.722	16.606	16.863
						17.159	
							Cost to Complete
							Total Cost
							Continuing

A. Mission Description and Budget Item Justification:

JSIMS is at the leading edge of the Goldwaters-Nichols Act as the vehicle to institute interoperability and Joint Training, and eliminate Service stovepipe training. JSIMS is a single, seamlessly integrated, simulation environment designed to train Commanders in Chief (CINCs) and Services to meet the Chairman's Joint Training System requirements. It includes a core infrastructure and mission space objects, both maintained in a common repository. The objects can be composed to create a simulation capability to support Joint or Service training, rehearsal, or education objectives. JSIMS is a core of common and joint representations and services, a runtime hardware and software infrastructure, interfaces, and representations of Air/Space, Land, and Maritime Warfare functionality. JSIMS includes a strategy for cooperative development that is based on the use of Executive Agents (i.e., Army, Navy, Air Force, etc.) to provide authoritative domain-specific representations. This synopsis also summarizes the JSIMS development acquisition strategy which was originally outlined in the formal JSIMS Systems Acquisition Master Plan (SAMP) dated 27 November 1996. This program is in Budget Activity 7 - Operational Systems Development, because it supports currently employed systems and training activities. The FY98 funding obligation strategy is planned to obligate approximately 50% of the funding within the first quarter of the fiscal year and the balance within the subsequent second and third quarters due to the majority of the JSIMS funding being planned for the Integration and Development contract.

FY 1997:

\$ 748 Purchase of minor equipment, supplies, and support associated with operations and staff within the JSIMS Joint Program Office (JPO).
Initial costs associated with establishing and initial staffing of the JSIMS JPO.
\$19.021 Supported the initial award of the integration and development contract for JSIMS, and support contracts associated with requirements and sequencing determination, and all aspects of technical support relating to domain engineering, Joint Conceptual Model of the Mission Space, architecture and integration, and development of a family of plans within the JSIMS JPO.
\$.649 Supported civilian personnel within the JSIMS JPO in areas of compensation and benefits relating to salaries.
\$.602 Supported costs within the JPO for all types of briefing, formal reviews, software program requirements, and small purchase transactions.
\$21.020 Total

U N C L A S S I F I E D

Exhibit R-2, RDT&E Budget Item Justification		Date: February 1998
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE:	
RD&E, Defense Wide, Joint Staff/BA 7	0902740J Joint Simulation System (JSIMS)	

FY 1998:

\$.325 Purchase of minor equipment and hardware for use in the JSIMS JPO and test bed area; lease of office space from GSA for JSIMS staff who are not located within Government provided facilities.

\$21.946 Supports major integration and development contract to support the first build cycle (Build 0) of JSIMS software which focuses on key components of Core Infrastructure and JSIMS Modeling and Simulation Resource Repository (JMSRR). Provides the first instance of integrating Development Agent mission space objects at a rudimentary level. Commence the second build cycle of software development (Build 1) which will mature the Core Infrastructure, complete the JMSRR, and begin development of the mission space objects.

\$.901 Supports civilian personnel within the JSIMS JPO in areas of compensation and benefits relating to salaries.

\$.271 Supports other areas of development of JSIMS in the areas of preparation for Milestone Reviews, internal oversight reviews, and baselining specification of program requirements across the Enterprise domain of Service Development Agents.

\$23.443 Total

FY1999:

\$.343 Purchase of minor equipment and hardware for continuation of work within the test bed; lease of office space from GSA for JSIMS staff who are not located within Government provided facilities.

\$23.116 Supports major integration and development contract to conclude the second build cycle and commence the third build cycle (Build 2). Conclude Build 2 and release (during last quarter) the JSIMS Version 1.0 software for operational testing; also funds some miscellaneous minor support contracts.

\$ 1.030 Supports civilian personnel within the JSIMS JPO in areas of compensation and benefits relating to salaries.

\$.286 Miscellaneous costs within the JPO associated with preparation of program reviews, day-to-day JPO operations, services, maintenance, support, and purchases made through small purchase procurement actions.

\$24.775 Total

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Date: February 1998

Exhibit R-2, RDT&E Budget Item Justification

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE:
RDT&E, Defense Wide, Joint Staff/BA 7	0902740J Joint Simulation System (JSIMS)

B. Program Change Summary:

	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>	<u>Total</u>
FY1998 President's Budget	21.054	24.321	25.179	Continuing
FY1998 Appropriated Value	0	24.321	0	
Adjustments	-.034	-.878	-.404	
FY1999 President's Budget	21.020	23.443	24.775	Continuing

Change Summary Explanation:

Reductions reflect program's share of Congressional/OSD reductions.

C. Other Program Funding Summary: N/AD. Schedule Profile:

	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Contract Award	X	X	X	
Build 0 Development Readiness Milestone				
Build 0 Integration Readiness Milestone				
Build 1 Development Readiness Milestone			X	
Build 1 Integration Readiness Milestone			X	
Build 2 Development Readiness Milestone			X	
Build 2 Integration Readiness Milestone			X	
JSIMS Operational Demonstration				X
JSIMS Initial Fielding				X

U N C L A S S I F I E D

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1998	
Appropriation/Budget Activity	R-1 Item Nomenclature/PE No/Project No		
Appropriation/Budget Activity	ASCIET, JTAMDO,JAMIP,C4IFTW, Joint C4ISR Battle Center (JBC), MGT HQ., JSIMS, PFP		
		FY97	FY98
			FY99
A. Project Cost Breakdown			
0603734J - ISLAND SUN		1.198	0.000
0603857J - All Service Combat Identification Evaluation Team (ASCIET)		0.000	0.000
TOTAL BA 04		1.198	0.000
0605126J - Joint Theater Air & Missile Defense Office (JTAMDO)		0.000	14.374
TOTAL BA 06		0.000	14.374
0208052J - Joint Analytical Model Improvement Program (JAMIP)		0.986	1.940
0303149J - C4I for the Warrior (C4IFTW)		2.502	2.506
0305188J - Joint C4ISR Battle Center (JBC)		2.829	2.808
0902298J - Management Headquarters (JWCA)		9.985	8.905
0902740J - Joint Simulation Systems (JSIMS)		21.020	23.443
TOTAL BA 07		37.322	39.602
TOTAL RDT&E		38.520	53.976
			69.495
B. Budget Acquisition History and Planning Information:			
ASCIET: FY99 is the first year for Joint Staff RDT&E funding for the All Service Combat Identification Evaluation Team (ASCIET).			
ASCIET FY97 and FY98 funding is provided through a Memorandum of Agreement (MOA) with all four services.			
JTAMDO: FY98 is the first year for RDT&E funding for the new Joint Theater Air & Missile Defense Organization (JTAMDO).			
			Exhibit R-3
		Page 1 of 2	

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RDTE&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1998
Appropriation/Budget Activity RDT&E, DEFENSE WIDE, THE JOINT STAFF	R-1 Item Nomenclature/PE No/Project No ASCIET, JTAMDO, JAMIP, C4IFTW, Joint C4ISR Battle Center (JBC), MGT HQ., JSIMS, PFP	

C4IFTW: Funding for C4I For the Warrior changed due to funding the Advanced Concepts NETWARS project through the FYDP. STEP transferred from the Joint Staff to DISA beginning FY99. The Joint Staff has exercised both oversight and acquisition responsibilities for STEP program since the program was approved by the MCEB and JROC in 1994 due to its enormous importance to the warfighting CINCs. The STEP Design Plan was approved on 7 October 1994. Since then, the program has matured to the point that it no longer requires direct Joint Staff program management and, in fact, the Defense Information Systems Agency (DISA) already has an office assigned which has been fulfilling program acquisition functions. DISA is better suited for program management functions and this transfer of responsibility is consistent with its role in other Military Satellite Communication System terminal and baseband equipment upgrade programs. The Joint Staff (J6) will retain its role as the program oversight authority to ensure that the program remains a viable asset to the warfighter.

JBC: All unobligated JBC FY97 resources transferred from DISA to TJS in April 1997. These FY97 resources were not reflected in the Joint Staff FY98 PB. Additionally, a new program element was established for JBC and funds were moved from PE 0303149J, C4I For the Warrior, to PE 0305188, Joint C4ISR Battle Center. Resources have been reallocated between Procurement and RDT&E based on JBC mission to assess, evaluate, and validate C4ISR systems in advance of service procurement fielding. Finally, due to the Defense Reform Initiative (DRI) the JBC program will be transferred to the United States Atlantic Command (USACOM) (Navy is the Executive Agent for USACOM).

Schedule of
Contract Advisory and Assistance Services (CAAS)
PB-15
Dollars in Thousands
Joint Staff

Research, Development, Test, and Evaluation, Defense-Wide

Category	FY 1997	FY 1998	FY 1999
1. Management & Professional Support Services			
FFRDC Work	-	-	-
Non- FFRDC Work	589	891	864
Subtotal	589	891	864
2. Studies, analysis, and Evaluations			
FFRDC	4,447	5,278	3,721
Non-FFRDC Work	9,251	16,864	21,571
Subtotal	13,698	22,142	25,292
3. Engineering and Technical Services			
FFRDC Work	604	1,194	1,340
Non-FFRDC Work	1,588	2,079	6,027
Subtotal	2,192	3,273	7,367
4. Totals			
FFRDC Work	5,051	6,472	5,061
Non-FFRDC Work	11,428	19,834	28,462
Grand Total	16,479	26,306	33,523

Increase in FY97/98 is primarily due to the transfer of the Joint Theater Air & Missile Defense Organization (JTAMDO) program funding to the Joint Staff.
 Increase in FY98/99 is primarily due to the transfer of the All Service Combat Identification Evaluation Team (ASCIET) program to the Joint Staff.